

Sub B

6. (canceled)

7. (canceled)

- 1 8. (original) A method of modifying quotes in an automated exchange trading system that
2 receives orders and quotes from remote computers, matches the orders and quotes to
3 generate trades, and stores orders and quotes that are unmatched, comprising the steps
4 of:
- 5 receiving trading parameters comprising a risk threshold;
- 6 associating said trading parameters with specified ones of received quotes;
- 7 determining whether a quote having associated trading parameters has been
8 filled as a result of a generated trade, and if so, determining a risk level and an
9 aggregate risk level associated with said trade;
- 10 comparing said aggregate risk level with said risk threshold; and,
- 11 automatically modifying at least one of the specified ones of received quotes if
12 said threshold is exceeded.
- 1 9. (original) The method of claim 8 wherein the step of determining a risk level comprises
2 calculating a delta value for the generated trade.
- 1 10. (original) The method of claim 8 wherein the step of determining a risk level comprises
2 calculating a trading volume for the generated trade.
- 1 11. (original) The method of claim 8 wherein the step of determining an aggregate risk
2 level comprises determining a net delta.
- 1 12. (original) The method of claim 8 wherein the trading parameters further comprise a
2 time duration, and wherein the step of determining an aggregate risk level comprises
3 summing the deltas from trades involving at least a subset of quotes contained in said
4 quote group that were executed within the time duration.
- 1 13. (original) The method of claim 8 wherein the trading parameters further comprise an
2 integer N, and wherein the step of determining an aggregate risk level comprises

- 3 summing the deltas from the most recent N trades involving at least a subset of quotes
4 contained in said quote group.
- 1 14. (original) The method of claim 8 wherein the step of determining an aggregate risk
2 level comprises determining a net contract volume.
- 1 15. (original) The method of claim 8 wherein the step of determining an aggregate risk
2 level comprises determining a weighted sum of contract volumes.
- 1 16. (original) The method of claim 8 wherein the step of determining an aggregate risk
2 level comprises determining an aggregate volume quantity.
- 1 17. (original) The method of claim 8 wherein the step of automatically modifying at least
2 one of the specified ones of said received quotes comprises canceling all said specified
3 ones of said received quotes.
- 1 18. (original) The method of claim 8 wherein the step of automatically modifying at least
2 one of the specified ones of said received quotes comprises reducing the quantity
3 associated with the specified ones of received quotes.
- 1 19. (original) The method of claim 8 wherein the step of automatically modifying at least
2 one of the specified ones of said quotes comprises revising at least one of the bid and
3 offer values of each of the specified ones of received quotes.
- 1 20. (original) The method of claim 8 wherein the trading parameters comprise a positive
2 risk threshold and a negative risk threshold.
- 1 21. (original) The method of claim 20 wherein the step of comparing the aggregate risk
2 level with the risk threshold comprises comparing the aggregate risk level to the
3 positive risk threshold if the aggregate risk level is positive, and comparing the
4 aggregate risk level to the negative risk threshold if the aggregate risk level is negative.
- 1 22. (original) The method of claim 8 wherein the step of comparing the aggregate risk level
2 with the risk threshold comprises comparing the absolute value of the aggregate risk
3 level to the risk threshold.

- 1 23. (original) The method of claim 8 wherein each of the specified ones of received quotes
2 are associated with one of a first subgroup and second subgroup, and wherein the step
3 of automatically modifying at least one of the specified ones of received quotes in the
4 quote group comprises reducing the offer values of the quotes in the first subgroup and
5 raising the bid values of the quotes in the second subgroup.
- 1 24. (original) The method of claim 23 wherein the first subgroup comprises quotes on call
2 series options and the second subgroup comprises quotes on put series options, and
3 wherein the aggregate risk is positive.
- 1 25. (original) The method of claim 23 wherein the first subgroup comprises quotes on put
2 series options and the second subgroup comprises quotes on call series options, and
3 wherein the aggregate risk is negative.
- 1 26. (original) The method of claim 23 where the amount of said reducing and raising is
2 determined in response to a modification increment parameter.
- 1 27. (original) The method of claim 8 further comprising the step of automatically
2 modifying a quote comprises regenerating a quote having associated trading parameters
3 that has been filled as a result of the generated trade.
- 1 28. (original) The method of claim 27 wherein the step of regenerating a quote is performed
2 utilizing a regeneration increment.

1 29. (canceled)

2 30. (canceled)

- 1 31. (new) A method of modifying quotes in an automated exchange trading system
2 comprising the steps of:
3 receiving orders and quotes, wherein specified ones of said quotes belong to a
4 quote group, and wherein said specified ones of said quotes have associated trading
5 parameters comprising a risk threshold;
6 generating a trade by matching said received orders and quotes to previously
7 received orders and quotes;

- 8 storing each of said orders and quotes when a trade is not generated;
- 9 determining whether a quote having associated trading parameters has been filled
- 10 as a result of the generated trade, and if so, determining a risk level and an aggregate
- 11 risk level associated with said trade;
- 12 comparing said aggregate risk level with said risk threshold; and,
- 13 automatically modifying at least one of the remaining said specified ones of said
- 14 quotes in the quote group if said threshold is exceeded.
- 1 32. (new) The method of claim 31 wherein the quotes are stored in a quote data structure
- 2 containing a plurality of quotes fields and at least one risk threshold field.
- 1 33. (new) The method of claim 32, wherein the plurality of quote fields comprises a bid quote
- 2 field and an offer quote field.
- 1 34. (new) The method of claim 32, wherein the data structure further comprises a group
- 2 indicator field.
- 1 35. (new) The method of claim 32, wherein the data structure further comprises a quote
- 2 modification increment field.
- 1 36. (new) The method of claim 32, wherein the data structure further comprises a quote
- 2 regeneration increment field.
- 1 37. (new) The method of claim 32, wherein the data structure further comprises an owner
- 2 field.

II. Response to the 35 U.S.C. § 103(a) Rejections of Claims 8-28

The Examiner has rejected claims 8-28 based on 35 U.S.C. § 103(a), citing U.S. Patent 5,809,483 (hereinafter “*Broka*”) and U.S. Patent 5,732,400 (hereinafter “*Mandler*”). In order to establish the required *prima facie* case of obviousness of a claimed invention by applying a combination of references, the proposed combination must teach or suggest all of the elements of the claimed invention. Furthermore, there must be a suggestion or motivation to combine the references. The Applicants respectfully submit that there is no motivation to combine the cited references, nor does the proposed combination teach or suggest the claimed combination of elements.

A. Failure to Provide an Objective Reason to Combine References

In order to establish the required *prima facie* case of obviousness of a claimed invention by applying a combination of references, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. See M.P.E.P. § 2143.01.

In addition, “a statement that modifications of the prior art to meet the claimed invention would have been ‘well within the ordinary skill of the art at the time the claimed invention was made’ because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references.” *Id.*

The Applicants respectfully submit that the Examiner's Office Action does not provide a prior art reference or a well-reasoned statement showing some suggestion of the desirability of doing what the Applicants have done. Without providing a reference or convincing reasoning, the Examiner, using impermissible hindsight and language paralleling the above-quoted language, states only that “[t]o provide the trading system of *Broka* to include a level of risk assessment would have been obvious to one of ordinary skill in the art in view of *Mandler*. ”

Because there is no suggestion to combine the references, the Applicants submit that claims 8-28 are allowable over the cited art. But even if, for the sake of argument, a motivation to combine the teachings did exist (which the Applicants do not concede), the combined teaching of *Broka* and *Mandler* fail to provide the method set forth in claim 8, as set forth below.

B. The Proposed Combination Does Not Teach All the Elements

Under 35 U.S.C. § 103(a), in order to establish the required *prima facie* case of obviousness of a claimed invention by applying a combination of references, the proposed combination must teach or suggest all of the elements of the claimed invention. M.P.E.P. § 2143. In particular, “the identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The Applicants traverse the rejections of claims 8-28: the Applicants respectively submit that the proposed combination of *Broka* and *Mandler* fails to teach or suggest the claimed elements of (paraphrasing certain elements of independent claim 8):

- (i) associating trading parameters (comprising a risk threshold) with specific received quotes;
- (ii) determining a risk level and aggregate risk level if a quote has been filled;

(iii) comparing the aggregate risk level with the risk threshold;

(iv) automatically modifying quotes if the threshold is exceeded.

Broka is an online transaction processing system that provides a manual quote modification screen. The quote modification screen identified by the Examiner appears to relate to a graphical user interface that allows an individual to selectively modify quotes. In particular, the specification of *Broka*, at column 15, indicates that if a user “selects a quote and then selects the Modify button... the system displays the Modify quote window” shown in figures 21(a) or (b), depending on whether the user is a dealer or broker. (*Broka*, col. 15, lines 13-18). The specification further describes that the user must select an “uptick” or a “downtick” to indicate how the quote should be modified. (*Broka*, col. 15, lines 41-47). Such quote modification in *Broka* is not automatically performed, nor is it done in response to an aggregate risk measurement.

Furthermore, the Examiner has not indicated in what manner *Broka* teaches the use of a risk threshold or associating the threshold to a quote; a risk level or aggregate risk level, or the use of the threshold and aggregate risk level to automatically modify a quote.

Finally, in addition to stating that modifying *Broka* to include a level of risk assessment would have been obvious, the Examiner also stated that “[d]oing such would incorporate well-known business rules criteria to assess whether a trade is to be executed or not.” This statement indicates that the Examiner has misread the Applicants’ claim limitations, resulting in the Examiner’s misplaced reliance on *Mandler*, which teaches that a potential buyer’s risk classification is dynamically determined for use in authorizing a pending transaction or request. (*Mandler*, col. 3, lines 39-54). Specifically, in Applicants’ invention, the level of risk assessment is not used to determine whether a trade is (or should be) executed. Rather, the risk level in